

2019 Chl

Parameters	Variable	Units	Mice	
			Male	Female
Body Weight	BW	kg	0.03	0.03
SPECIAL FLOW RATES				
Alveolar Ventilation (unscaled)	QPC	L/h/kg ^{0.75}	29.1	29.1
Unscaled Cardiac Output	QCC	L/h/kg ^{0.75}	20.1	20.1
*Model parameters were optimized with ACSL-optimize (version 11.8.4) as stated in Yang et al. 2012				
FRACTIONAL BLOOD FLOWS TO TISSUES				
Flow to Liver as fraction Cardiac Output	QLC	unitless	0.161	0.161
Flow to Fat as fraction Cardiac Output	QFC	unitless	0.07	0.07
Flow to Slow as fraction Cardiac Output	QSC	unitless	0.159	0.159
Flow to Kidney as fraction Cardiac Output	QKC	unitless	0.09	0.09
FRACTIONAL VOLUMES OF TISSUES				
Volume Liver as fraction Body Weight	VLC	unitless	0.055	0.055
Volume Lung as fraction Body Weight	VLUC	unitless	0.0073	0.0073
Volume Fat as fraction Body Weight	VFC	unitless	0.1	0.1
Volume Rapid Perfused as fraction Body Weight	VRC	unitless	0.08098	0.08098
Volume Slow Perfused as fraction Body Weight	VSC	unitless	0.384	0.384
Volume Kidney as fraction Body Weight	VKC	unitless	0.0167	0.0167
PARTITION COEFFICIENTS				
Liver/Blood Partition Coefficient	PL	unitless	1.26	1.26
Lung/Blood Partition Coefficient	PLU	unitless	2.38	2.38
Fat/Blood Partition Coefficient	PF	unitless	17.35	17.35
Slow/Blood Partition Coefficient	PS	unitless	0.59	0.59
Rapid/Blood Partition Coefficient	PR	unitless	1.76	1.76
Blood/Air Partition Coefficient	PB	unitless	7.83	7.83
Kidney/Blood Partition Coefficient	PK	unitless	1.76	1.76
Molecular weight	MW	g/mol	88.5	88.5

KINETIC CONSTANTS

DOSING INFORMATION

Initial concentration CONC ppm

oroprene Physiological Model Parameters

Source	Rats		Source	Humans Mixed
	Male	Female		
Brown et al. 1997 (Table 1)	0.25	0.25	Brown et al. 1997 (p.413)	70
Brown et al. 1997 (Table 31)	22.4	22.4	Brown et al. 1997 (Table 31)	24
Marino et al. 2006 (QPC/QCC = 1.45) using Brown et al. 1997 values initially	18.7	18.7	Brown et al. 1997 (Table 22) (QPC/QCC = 1.20)	16.5
Brown et al. 1997 (Table 23)	0.183	0.183	Brown et al. 1997 (Table 23)	0.227
Brown et al. 1997 (Table 23; Same as rat value)	0.07	0.07	Brown et al. 1997 (Table 23)	0.052
Brown et al. 1997 (Table 23); Same as that reported for muscle	0.278	0.278	Brown et al. 1997 (Table 23); Same as that reported for muscle	0.191
Brown et al. 1997 (Table 23)	0.14	0.14	Brown et al. 1997 (Table 23)	0.175
Brown et al. 1997 (Table 4)	0.0366	0.0366	Brown et al. 1997 (Table 5)	0.0257
Brown et al. 1997 (Table 4)	0.005	0.005	Brown et al. 1997 (Table 5)	0.0076
Brown et al. 1997 (Table 10)	0.1	0.1	Brown et al. 1997 (Table 13)	0.27
Brown et al. 1997 (Table 4); Sum of adrenals, brain, stomach, small intestine, large intestine, heart, lungs, pancreas, spleen and thyroid	0.04644	0.04644	Brown et al. 1997 (Table 5); Sum of adrenals, brain, stomach, small intestine, large intestine, heart, lungs, pancreas, spleen and thyroid	0.0533
Brown et al. 1997 (Table 4); Same as that reported for muscle	0.4	0.4	Brown et al. 1997 (Table 5); Same as that reported for muscle	0.4
Brown et al. 1997 (Table 4)	0.0073	0.0073	Brown et al. 1997 (Table 5)	0.0044
Ramboll (2019) Table S-2	1.58	1.58	Ramboll (2019) Table S-2	2.37
Ramboll (2019) Table S-2	1.85	1.85	Ramboll (2019) Table S-2	2.94
Ramboll (2019) Table S-2	16.99	16.99	Ramboll (2019) Table S-2	28.65
Ramboll (2019) Table S-2	0.6	0.6	Ramboll (2019) Table S-2	1
Ramboll (2019) Table S-2	2.29	2.29	Ramboll (2019) Table S-2	2.67
Ramboll (2019) Table S-2	7.35	7.35	Ramboll (2019) Table S-2	4.54
Ramboll (2019) Table S-2	2.29	2.29	Ramboll (2019) Table S-2	2.67
https://pubchem.ncbi.nlm.nih.gov/compound/31369#section=Chemical-and-Physical-Properties	88.5	88.5	https://pubchem.ncbi.nlm.nih.gov/compound/31369#section=Chemical-and-Physical-Properties	88.5

See Metabolism Params Tab in Excel Workbook

ED_004493_00000045-00004

Source	mouse (ml/min/100 g) (ml/min)	rat (ml/min/100 g) (ml/min)	Human (L/min) (ml/min)
Clewel et al. 2001 (Table 1)	116.54	52.80	9.68
Clewel et al. 2001 (Table 1) (QPC/QCC = 1.45)	24.15	110.19	6655.13
Brown et al. 1997 (p.415)		1.72 <- ratio of L9 to 14 ml/min 11.65 <- QCC corresponding to 15 ml/min	
Brown et al. 1997 (Table 23)			
Brown et al. 1997 (Table 23)		1.197860963	1.454545455
Brown et al. 1997 (Table 23); Same as that reported for muscle			
Brown et al. 1997 (Table 23)			
Brown et al. 1997 (Table 7)			
Brown et al. 1997 (Table 7)			
Brown et al. 1997 (Table14); Average of total male and female	mouse	rat	human
Brown et al. 1997 (Table 7); Sum of adrenals, brain, stomach, small intestine, large intestine, heart, lungs, pancreas, spleen and thyroid	8.098	4.644	5.33
Brown et al. 1997 (Table 7); Same as that reported for muscle	7.368	4.144	4.57
Brown et al. 1997 (Table 7)			
Ramboll (2019) Table S-2			
Ramboll (2019) Table S-2			
Ramboll (2019) Table S-2			
Ramboll (2019) Table S-2			
Ramboll (2019) Table S-2			
Ramboll (2019) Table S-2			
Ramboll (2019) Table S-2			
https://pubchem.ncbi.nlm.nih.gov/compound/31369#section=Chemical-and-Physical-Properties			

ED_004493_00000045-00006

<- Check calculations of VRC

<- Above, minus lung

ED_004493_00000045-00008

Cell: F4

Comment: Schlosser, Paul:

Table 1 of Brown gives a growth curve, but this matches BW in Himmelstein et al. (2004b)

Cell: I4

Comment: Schlosser, Paul:

Brown et al. gives a range, but matches Himmelstein et al. (2004b)

Cell: L9

Comment: Schlosser, Paul:

Brown et al, Table 22, says 12-16, but new analysis/discussion in report justifies the larger value.

Cell: A21

Comment: Schlosser, Paul:

Should not include lung, since that is a separate tissue

Cell: D21

Comment: Schlosser, Paul:

Should not include VLUC.